Project Management Process Groups and Processes

According to PMI PMBOK® Guide - Sixth Edition

INITIATING PROCESS GROUP [Part2.2]

Develop Project Charter (P1.4.1) [P2.2.1]

Inputs
1- Business Documents
2- Agreements
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Interpersonal and Team Skills
4- Meetings

Outputs
1- Project Charter
2- Assumption Log

Identify Stakeholders (P1.13.1) [P2.2.2]

Inputs
1- Project Charter
2- Business Documents
3- Project Management Plan
4- Project Documents
5- Agreements
6- Enterprise Environmental Factors (EEFs)
7- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Data Representation
5- Meetings

Outputs
1- Stakeholder Register
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

PLANNING PROCESS GROUP [Part2.3]

Develop Project Management Plan (P1.4.2) [P2.3.1]

Inputs
1- Project Charter
2- Outputs from Other Processes
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Interpersonal and Team Skills
4- Meetings

Outputs
1- Project Management Plan

Plan Scope Management (P1.5.1) [P2.3.2]

Inputs
1- Project Charter
2- Project Management Plan
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Meetings

Outputs
1- Scope Management Plan
2- Requirements Management Plan

Collect Requirements (P1.5.2) [P2.3.3]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Business Documents
5- Agreements
6- Enterprise Environmental Factors (EEFs)
7- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Decision Making
5- Data Representation
6- Interpersonal and Team Skills
7- Context Diagram
8- Prototypes

Outputs
1- Requirements Documentation
2- Requirements Traceability Matrix

Define Scope (P1.5.3) [P2.3.4]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Decision Making
4- Interpersonal and Team Skills
5- Product Analysis

Outputs
1- Project Scope Statement (PSS)
2- Project Documents Updates

Create WBS (P1.5.4) [P2.3.5]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Decomposition

Outputs
1- Scope Baseline
2- Project Documents Updates

Plan Schedule Management (P1.6.1) [P2.3.6]

Inputs
1- Project Charter
2- Project Management Plan
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Meetings

Outputs
1- Schedule Management Plan

Define Activities (P1.6.2) [P2.3.7]

Inputs
1- Project Management Plan
2- Enterprise Environmental Factors (EEFs)
3- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Decomposition
3- Rolling Wave Planning
4- Meetings

Outputs
1- Activity List
2- Activity Attributes
3- Milestone List
4- Change Requests
5- Project Management Plan Updates

Sequence Activities (P1.6.3) [P2.3.8]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Precedence Diagraming Method (PDM)
2- Dependency Determination and Integration
3- Leads and Lags
4- Project Management Information System (PMIS)

Outputs
1- Project Schedule Network Diagrams
2- Project Documents Updates

Estimate Activity Durations (P1.6.4) [P2.3.9]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Analogous Estimating
3- Parametric Estimating
4- Three-Point Estimating
5- Bottom-Up Estimating
6- Data Analysis
7- Decision Making
8- Meetings

Outputs
1- Duration Estimates
2- Basis of Estimates
3- Project Documents Updates

Develop Schedule (P1.6.5) [P2.3.10]

Inputs
1- Project Management Plan
2- Project Documents
3- Agreements
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Schedule Network Analysis
2- Critical Path Method (CPM)
3- Resource Optimization
4- Data Analysis
5- Leads and Lags
6- Schedule Compression
7- Project Management Information System (PMIS)
8- Agile Release Planning

Outputs
1- Schedule Baseline
2- Project Schedule
3- Schedule Data
4- Project Calendars
5- Change Requests
6- Project Management Plan Updates
7- Project Documents Updates

Plan Procurement Management (P1.12.1) [P2.3.23]

Inputs
1- Project Charter
2- Business Documents
3- Project Management Plan
4- Project Documents
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Source Selection Analysis
5- Meetings

Outputs
1- Procurement Management Plan
2- Procurement Strategy
3- Bid Documents
4- Procurement Statement of Work (SOW)
5- Source Selection Criteria
6- Make-or-Buy Decisions
7- Independent Cost Estimates
8- Change Requests
9- Project Documents Updates
10- Organizational Process Assets Updates

Plan Cost Management (P1.7.1) [P2.3.11]

Inputs
1- Project Charter
2- Project Management Plan
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Meetings

Outputs
1- Cost Management Plan

Estimate Costs (P1.7.2) [P2.3.12]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Analogous Estimating
3- Parametric Estimating
4- Bottom-Up Estimating
5- Three-Point Estimating
6- Data Analysis
7- Project Management Information System (PMIS)
8- Decision Making

Outputs
1- Cost Estimates
2- Basis of Estimates
3- Project Documents Updates

Determine Budget (P1.7.3) [P2.3.13]

Inputs
1- Project Management Plan
2- Project Documents
3- Business Documents
4- Agreements
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Cost Aggregation
3- Data Analysis
4- Historical Information Review
5- Funding Limit Reconciliation
6- Financing

Outputs
1- Cost Baseline
2- Project Funding Requirements
3- Project Documents Updates

Plan Quality Management (P1.8.1) [P2.3.14]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Decision Making
5- Data Representation
6- Test and Inspection Planning
7- Meetings

Outputs
1- Quality Management Plan
2- Quality Metrics
3- Project Management Plan Updates
4- Project Documents Updates

Plan Resource Management (P1.9.1) [P2.3.15]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Representation
3- Organizational Theory
4- Meetings

Outputs
1- Resource Management Plan
2- Team Charter
3- Project Documents Updates

Estimate Activity Resources (P1.9.2) [P2.3.16]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Bottom-Up Estimating
3- Analogous Estimating
4- Parametric Estimating
5- Data Analysis
6- Project Management Information System (PMIS)
7- Meetings

Outputs
1- Resource Requirements
2- Basis of Estimates
3- Resource Breakdown Structure (RBS)
4- Project Documents Updates

Plan Communications Management (P1.10.1) [P2.3.17]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Communication Requirements Analysis
3- Communication Technology
4- Communication Models
5- Communication Methods
6- Interpersonal and Team Skills
7- Data Representation
8- Meetings

Outputs
1- Communications Management Plan
2- Project Management Plan Updates
3- Project Documents Updates

Plan Risk Management (P1.11.1) [P2.3.18]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Meetings

Outputs
1- Risk Management Plan

Identify Risks (P1.11.2) [P2.3.19]

Inputs
1- Project Management Plan
2- Project Documents
3- Agreements
4- Procurement Documentation
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Interpersonal and Team Skills
5- Prompt Lists
6- Meetings

Outputs
1- Risk Register
2- Risk Report
3- Project Documents Updates

Perform Qualitative Risk Analysis (P1.11.3) [P2.3.20]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Interpersonal and Team Skills
5- Risk Categorization
6- Data Representation
7- Meetings

Outputs
1- Project Documents Updates

Perform Quantitative Risk Analysis (P1.11.4) [P2.3.21]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Interpersonal and Team Skills
4- Representations of Uncertainty
5- Data Analysis

Outputs
1- Project Documents Updates

Plan Risk Responses (P1.11.5) [P2.3.22]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Interpersonal and Team Skills
4- Strategies for Threats
5- Strategies for Opportunities
6- Contingent Response Strategies
7- Strategies for Overall Project Risk
8- Data Analysis
9- Decision Making

Outputs
1- Change Requests
2- Project Management Plan Updates
3- Project Documents Updates

Plan Stakeholder Engagement (P1.13.2) [P2.3.24]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Agreements
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Gathering
3- Data Analysis
4- Decision Making
5- Data Representation
6- Meetings

Outputs
1- Stakeholder Engagement Plan

EXECUTING PROCESS GROUP [Part2.4]

Direct and Manage Project Work (P1.4.3) [P2.4.1]

Inputs
1- Project Management Plan
2- Project Documents
3- Approved Change Requests
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Project Management Information System (PMIS)
3- Meetings

Outputs
1- Deliverables
2- Work Performance Data
3- Issue Log
4- Change Requests
5- Project Management Plan Updates
6- Project Documents Updates
7- Organizational Process Assets Updates

Manage Project Knowledge (P1.4.4) [P2.4.2]

Inputs
1- Project Management Plan
2- Project Documents
3- Deliverables
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Knowledge Management
3- Information Management
4- Interpersonal and Team Skills

Outputs
1- Lessons Learned Register
2- Project Management Plan Updates
3- Organizational Process Assets Updates

Acquire Resources (P1.9.3) [P2.4.4]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Decision Making
2- Interpersonal and Team Skills
3- Pre-Assignment
4- Virtual Teams

Outputs
1- Physical Resource Assignments
2- Project Team Assignments
3- Resource Calendars
4- Change Requests
5- Project Management Plan Updates
6- Project Documents Updates
7- Enterprise Environmental Factors Updates
8- Organizational Process Assets Updates

Develop Team (P1.9.4) [P2.4.5]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Colocation
2- Virtual Teams
3- Communication Technology
4- Interpersonal and Team Skills
5- Recognition and Rewards
6- Training
7- Individual and Team Assessment
8- Meetings

Outputs
1- Team Performance Assessments
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates
5- Enterprise Environmental Factors Updates
6- Organizational Process Assets Updates

Manage Team (P1.9.5) [P2.4.6]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Reports
4- Team Performance Assessments
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Interpersonal and Team Skills
2- Project Management Information System (PMIS)

Outputs
1- Change Requests
2- Project Management Plan Updates
3- Project Documents Updates
4- Enterprise Environmental Factors Updates

Manage Quality (P1.8.2) [P2.4.3]

Inputs
1- Project Management Plan
2- Project Documents
3- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Gathering
2- Data Analysis
3- Decision Making
4- Data Representation
5- Audits
6- Design for X (DfX)
7- Problem Solving
8- Quality Improvement Methods

Outputs
1- Quality Reports
2- Test and Evaluation Documents
3- Change Requests
4- Project Management Plan Updates
5- Project Documents Updates

Manage Communications (P1.10.2) [P2.4.7]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Reports
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Communication Technology
2- Communication Methods
3- Communication Skills
4- Project Management Information System (PMIS)
5- Project Reporting
6- Interpersonal and Team Skills
7- Meetings

Outputs
1- Project Communications
2- Project Management Plan Updates
3- Project Documents Updates
4- Organizational Process Assets Updates

Implement Risk Responses (P1.11.6) [P2.4.8]

Inputs
1- Project Management Plan
2- Project Documents
3- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Interpersonal and Team Skills
3- Project Management Information System (PMIS)

Outputs
1- Change Requests
2- Project Documents Updates

Conduct Procurements (P1.12.2) [P2.4.9]

Inputs
1- Project Management Plan
2- Project Documents
3- Procurement Documentation
4- Seller Proposals
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Advertising
3- Bidder Conferences
4- Data Analysis
5- Interpersonal and Team Skills

Outputs
1- Selected Sellers
2- Agreements
3- Change Requests
4- Project Management Plan Updates
5- Project Documents Updates
6- Organizational Process Assets Updates

Manage Stakeholder Engagement (P1.13.3) [P2.4.10]

Inputs
1- Project Management Plan
2- Project Documents
3- Enterprise Environmental Factors (EEFs)
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Communication Skills
3- Interpersonal and Team Skills
4- Ground Rules
5- Meetings

Outputs
1- Change Requests
2- Project Management Plan Updates
3- Project Documents Updates

MONITORING & CONTROLLING PROCESS GROUP [Part2.5]

Monitor and Control Project Work (P1.4.5) [P2.5.1]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Information
4- Agreements
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Decision Making
4- Meetings

Outputs
1- Work Performance Reports
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

Perform Integrated Change Control (P1.4.6) [P2.5.2]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Reports
4- Change Requests
5- Enterprise Environmental Factors (EEFs)
6- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Change Control Tools
3- Data Analysis
4- Decision Making
5- Meetings

Outputs
1- Approved Change Requests
2- Project Management Plan Updates
3- Project Documents Updates

Validate Scope (P1.5.5) [P2.5.3]

Inputs
1- Project Management Plan
2- Project Documents
3- Verified Deliverables
4- Work Performance Data

Tools & Techniques
1- Inspection
2- Decision Making

Outputs
1- Accepted Deliverables
2- Work Performance Information
3- Change Requests
4- Project Documents Updates

Control Scope (P1.5.6) [P2.5.4]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Analysis

Outputs
1- Work Performance Information
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

Control Schedule (P1.6.6) [P2.5.5]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Analysis
2- Critical Path Method (CPM)
3- Project Management Information System (PMIS)
4- Resource Optimization
5- Lead and Lags
6- Schedule Compression

Outputs
1- Work Performance Information
2- Schedule Forecasts
3- Change Requests
4- Project Management Plan Updates
5- Project Documents Updates

Control Costs (P1.7.4) [P2.5.6]

Inputs
1- Project Management Plan
2- Project Documents
3- Project Funding Requirements
4- Work Performance Data
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- To-Complete Performance Index (TCPI)
4- Project Management Information System (PMIS)

Outputs
1- Work Performance Information
2- Cost Forecasts
3- Change Requests
4- Project Management Plan Updates
5- Project Documents Updates

Control Quality (P1.8.3) [P2.5.7]

Inputs
1- Project Management Plan
2- Project Documents
3- Approved Change Requests
4- Deliverables
5- Work Performance Data
6- Enterprise Environmental Factors (EEFs)
7- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Gathering
2- Data Analysis
3- Inspection
4- Testing/Product Evaluations
5- Data Representation
6- Meetings

Ouputs
1- Quality Control Measurements
2- Verified Deliverables
3- Work Performance Information
4- Change Requests
5- Project Management Plan Updates
6- Project Documents Updates

Control Resources (P1.9.6) [P2.5.8]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Agreements
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Analysis
2- Problem Solving
3- Interpersonal and Team Skills
4- Project Management Information System (PMIS)

Outputs
1- Work Performance Information
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

Monitor Communications (P1.10.3) [P2.5.9]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Project Management Information System (PMIS)
3- Data Representation
4- Interpersonal and Team Skills
5- Meetings

Outputs
1- Work Performance Information
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

Monitor Risks (P1.11.7) [P2.5.10]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Work Performance Reports

Tools & Techniques
1- Data Analysis
2- Audits
3- Meetings

Outputs
1- Work Performance Information
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates
5- Organizational Process Assets Updates

Control Procurements (P1.12.3) [P2.5.11]

Inputs
1- Project Management Plan
2- Project Documents
3- Agreements
4- Procurement Documentation
5- Approved Change Requests
6- Work Performance Data
7- Enterprise Environmental Factors (EEFs)
8- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Claims Administration
3- Data Analysis
4- Inspection
5- Audits

Outputs
1- Closed Procurements
2- Work Performance Information
3- Procurement Documentation Updates
4- Change Requests
5- Project Management PlanUpdates
6- Project Documents Updates
7- Organizational Process Assets Updates

Monitor Stakeholder Engagement (P1.13.4) [P2.5.12]

Inputs
1- Project Management Plan
2- Project Documents
3- Work Performance Data
4- Enterprise Environmental Factors (EEFs)
5- Organizational Process Assets (OPAs)

Tools & Techniques
1- Data Analysis
2- Decision Making
3- Data Representation
4- Communication Skills
5- Interpersonal and Team Skills
6- Meetings

Outputs
1- Work Performance Information
2- Change Requests
3- Project Management Plan Updates
4- Project Documents Updates

CLOSING PROCESS GROUP [Part2.6]

Close Project or Phase (P1.4.7) [P2.6.1]

Inputs
1- Project Charter
2- Project Management Plan
3- Project Documents
4- Accepted Deliverables
5- Business Documents
6- Agreements
7- Procurement Documentation
8- Organizational Process Assets (OPAs)

Tools & Techniques
1- Expert Judgment
2- Data Analysis
3- Meetings

Outputs
1- Project Documents Updates
2- Final Product, Service, or Result Transition
3- Final Report
4- Organizational Process Assets Updates

Final Product, Service, or Result.

Annotations

Annotation 1
The PMI PMBOK® Guide – 6th Edition stands for Project Management Institute's Project Management Body Of Knowledge Guide – Sixth Edition.

Annotation 2
[P2.X1]
Part2: The "Standard" for Project Management. X1: The Project Management five (5) Process Groups.

Annotation 3
[P2.Y1.Y2]
Part2: The "Standard" for Project Management. Y1: The Project Management five (5) Process Groups. Y2: The Project Management forty nine (49) Processes.

Annotation 4
(P1.Z1.Z2)
Part1: The "Guide" to the Project Management Body of Knowledge (PMBOK Guide). Z1: Project Management ten (10) Knowledge Areas sections. Z2: Project Management Knowledge Areas subsections.

Annotation 5
Among the total of six hundred sixty five (665) ITTOs (i.e.; Inputs, Tools & Techniques, and Outputs) only one hundred forty seven (147) ITTOs are unique.

Annotation 6
The arrows portray examples of permutating through interrelationships, interactions, overlaps, iterations, and integration within and among the Project Management Processes and Process Groups.

Annotation 7
In reality, and due to uniqueness of individual projects, the appropriate application and agility of Processes and Process Groups are determined by the Project Management Professional (PMP) through managing/engaging the project stakeholders.

Annotation 8
The Project Management Processes are shown in the Process Group in which most of the related activities take place.

Annotation 9
The Project Management Process Groups are neither project life cycle phases nor stages.

PROJECT MANAGEMENT KNOWLEDGE AREAS (P1.4-13)

Project Integration Management (P1.4)
Project Schedule Management (P1.6)
Project Quality Management (P1.8)
Project Communications Management (P1.10)
Project Procurement Management (P1.12)
Project Scope Management (P1.5)
Project Cost Management (P1.7)
Project Resource Management (P1.9)
Project Risk Management (P1.11)
Project Stakeholder Management (P1.13)

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عـمـليـات ومـجـمـوعـات عـمـلـيـات إدارة المـشـروعـات

وَفْـقًا لِـدَلـيـلِ الـمَـتْـنِ الـمَـعْـرِفـيِّ لإدارَةِ الـمَـشْـرُوعـات - الإِصْـدارِ الـسَّـادِسِ - مَـعْـهَـدِ إدارَةِ الـمَـشْـرُوعـات

مَجْمُوعَةُ عَمَلِيَّاتِ البَدْء [Part2.2]

تَطْوِيرُ مِيثاقِ المَشْرُوع (P1.4.1) [P2.2.1]

المُدخَلات:
1- وَثائِقُ الاسْتِثْمار
2- الاتِّفاقات
3- عَوامِلُ بِيئَةِ المَشْرُوع (EEFs)
4- مَوْجُودُ العَمَلِيَّاتِ المُنَظَّمِيَّة (OPAs)

الوَسائِلُ والأساليب:
1- اجْتِهادُ الخُبَراء
2- جَمْعُ البَيانات
3- المَهاراتُ البَيْشَخْصِيَّةُ (Interpersonal) وَالعَمَلُ الجَماعِيّ
4- الاجْتِماعات

المُخرَجات:
1- مِيثاقُ المَشْرُوع
2- مَحْضَرُ الافْتِراضات

تَحْدِيدُ المَعنِيِّين (P1.13.1) [P2.2.2]

المُدخَلات:
1- مِيثاقُ المَشْرُوع
2- وَثائِقُ الاسْتِثْمار
3- خُطَّةُ إدارَةِ المَشْرُوع
4- وَثائِقُ المَشْرُوع
5- الاتِّفاقات
6- عَوامِلُ بِيئَةِ المَشْرُوع (EEFs)
7- مَوْجُودُ العَمَلِيَّاتِ المُنَظَّمِيَّة (OPAs)

الوَسائِلُ والأساليب:
1- اجْتِهادُ الخُبَراء
2- جَمْعُ البَيانات
3- تَحْلِيلُ البَيانات
4- تَمْثِيلُ البَيانات
5- الاجْتِماعات

المُخرَجات:
1- سِجِلُّ المَعْنِيِّين
2- طَلَباتُ التَّغْيِير
3- مُسْتَجَدَّاتُ خُطَّةِ إدارَةِ المَشْرُوع
4- مُسْتَجَدَّاتُ وَثائِقِ المَشْرُوع

مَجْمُوعَةُ عَمَلِيَّاتِ التَّخْطِيط [Part2.3]

- تَطْوِيرُ خُطَّةِ إدارَةِ المَشْرُوع (P1.4.2) [P2.3.1]
- تَخْطِيطُ إدارَةِ النِّطاق (P1.5.1) [P2.3.2]
- جَمْعُ المُتَطَلَّبات (P1.5.2) [P2.3.3]
- تَعْرِيفُ النِّطاق (P1.5.3) [P2.3.4]
- إنْشاءُ هَيْكَلِ تَحْلِيلِ العَمَل (WBS) (P1.5.4) [P2.3.5]
- تَخْطِيطُ إدارَةِ الجَدْوَلِ الزَّمَنِيّ (P1.6.1) [P2.3.6]
- تَعْرِيفُ الأَنْشِطَة (P1.6.2) [P2.3.7]
- سَلْسَلَةُ الأَنْشِطَة (P1.6.3) [P2.3.8]
- تَقْدِيرُ مُدَدِ الأَنْشِطَة (P1.6.4) [P2.3.9]
- تَطْوِيرُ الجَدْوَلِ الزَّمَنِيّ (P1.6.5) [P2.3.10]
- تَخْطِيطُ إدارَةِ الكُلْفَة (P1.7.1) [P2.3.11]
- تَقْدِيرُ التَّكالِيف (P1.7.2) [P2.3.12]
- تَقْرِيرُ المُوازَنَة (P1.7.3) [P2.3.13]
- تَخْطِيطُ إدارَةِ الجَوْدَة (P1.8.1) [P2.3.14]
- تَخْطِيطُ إدارَةِ المَوارِد (P1.9.1) [P2.3.15]
- تَقْدِيرُ مَوارِدِ الأَنْشِطَة (P1.9.2) [P2.3.16]
- تَخْطِيطُ إدارَةِ التَّواصُل (P1.10.1) [P2.3.17]
- تَخْطِيطُ إدارَةِ المُجازَفات (P1.11.1) [P2.3.18]
- تَحْدِيدُ المُجازَفات (P1.11.2) [P2.3.19]
- أَداءُ التَّحْلِيلِ النَّوْعِيِّ لِلْمُجازَفات (P1.11.3) [P2.3.20]
- أَداءُ التَّحْلِيلِ الكَمِّيِّ لِلْمُجازَفات (P1.11.4) [P2.3.21]
- تَخْطِيطُ اسْتِجاباتِ المُجازَفات (P1.11.5) [P2.3.22]
- تَخْطِيطُ إدارَةِ التَّوْرِيدات (P1.12.1) [P2.3.23]
- تَخْطِيطُ مُشارَكَةِ المَعْنِيِّين (P1.13.2) [P2.3.24]

مَجْمُوعَةُ عَمَلِيَّاتِ التَّنْفِيذ [Part2.4]

- تَوْجِيهُ وَإدارَةُ عَمَلِ المَشْرُوع (P1.4.3) [P2.4.1]
- إدارَةُ مَعارِفِ المَشْرُوع (P1.4.4) [P2.4.2]
- إدارَةُ الجَوْدَة (P1.8.2) [P2.4.3]
- اكْتِسابُ المَوارِد (P1.9.3) [P2.4.4]
- تَطْوِيرُ الفَرِيق (P1.9.4) [P2.4.5]
- إدارَةُ الفَرِيق (P1.9.5) [P2.4.6]
- إدارَةُ التَّواصُل (P1.10.2) [P2.4.7]
- إنْجازُ اسْتِجاباتِ المُجازَفات (P1.11.6) [P2.4.8]
- تَدْبِيرُ التَّوْرِيدات (P1.12.2) [P2.4.9]
- إدارَةُ مُشارَكَةِ المَعْنِيِّين (P1.13.3) [P2.4.10]

مَجْمُوعَةُ عَمَلِيَّاتِ المُراقَبَةِ وَالضَّبْط [Part2.5]

- مُراقَبَةُ وَضَبْطُ عَمَلِ المَشْرُوع (P1.4.5) [P2.5.1]
- أَداءُ ضَبْطِ التَّغْيِيرِ المُتَكامِل (P1.4.6) [P2.5.2]
- مُصادَقَةُ النِّطاق (P1.5.5) [P2.5.3]
- ضَبْطُ النِّطاق (P1.5.6) [P2.5.4]
- ضَبْطُ الجَدْوَلِ الزَّمَنِيّ (P1.6.6) [P2.5.5]
- ضَبْطُ التَّكالِيف (P1.7.4) [P2.5.6]
- ضَبْطُ الجَوْدَة (P1.8.3) [P2.5.7]
- ضَبْطُ المَوارِد (P1.9.6) [P2.5.8]
- مُراقَبَةُ التَّواصُل (P1.10.3) [P2.5.9]
- مُراقَبَةُ المُجازَفات (P1.11.7) [P2.5.10]
- ضَبْطُ التَّوْرِيدات (P1.12.3) [P2.5.11]
- مُراقَبَةُ مُشارَكَةِ المَعْنِيِّين (P1.13.4) [P2.5.12]

مَجموعَةُ عَمَليّاتِ الخِتام [Part2.6]

إِتْمامُ المَشْرُوعِ أَو الطَّوْر (P1.4.7) [P2.6.1]

المُدخَلات:
1- مِيثاقُ المَشْرُوع
2- خُطَّةُ إدارَةِ المَشْرُوع
3- وَثائِقُ المَشْرُوع
4- المُسْتَلَماتُ المَقْبُولَة
5- وَثائِقُ الاسْتِثْمار
6- الاتِّفاقات
7- بَياناتُ التَّوْرِيداتِ المُوَثَّقَة
8- مَوْجُودُ العَمَلِيَّاتِ المُنَظَّمِيَّة (OPAs)

الوَسائِلُ والأساليب:
1- اجْتِهادُ الخُبَراء
2- تَحْلِيلُ البَيانات
3- الاجْتِماعات

المُخرَجات:
1- مُسْتَجَدَّاتُ وَثائِقِ المَشْرُوع
2- الانْتِقالُ النِّهائِيّ لِلمُنْتَجِ، أَو الخِدْمَةِ، أَو النَّتِيجَة
3- التَّقْرِيرُ النِّهائِيّ
4- مُسْتَجَدَّاتُ مَوْجُودِ العَمَلِيَّاتِ المُنَظَّمِيَّة

المُنْتَج، أو الخِدْمَة، أو النَّتِيجَة النِّهائِيَّة.

تَفْسِير 1
[P2.X1]
P2: يَرمُزُ إلى جُزْءِ (Part) المِعْيارِ القِياسِيّ "Standard" لإدارَةِ المَشْرُوعات.
X1: يَرمُزُ إلى مَجْمُوعاتِ عَمَلِيَّاتِ (Process Groups) إدارَةِ المَشْرُوعاتِ الخَمْس (5).

تَفْسِير 2
[P2.Y1.Y2]
P2: يَرمُزُ إلى جُزْءِ (Part) المِعْيارِ القِياسِيّ "Standard" لإدارَةِ المَشْرُوعات.
Y1: يَرمُزُ إلى مَجْمُوعاتِ عَمَلِيَّاتِ (Process Groups) إدارَةِ المَشْرُوعاتِ الخَمْس (5). Y2: يَرمُزُ إلى عَمَلِيَّاتِ (Process) إدارَةِ المَشْرُوعاتِ التِّسْعِ وَالأَرْبَعِين (49).

تَفْسِير 3
(P1.Z1.Z2)
P1: يَرمُزُ إلى جُزْءِ (Part) دَلِيلِ "Guide" المَتْنِ المَعْرِفِيّ لإدارَةِ المَشْرُوعات.
Z1: يَرمُزُ إلى أَبْوابِ المَجالاتِ المَعرِفِيَّةِ (Knowledge Areas) العَشْرَةِ (10).
Z2: يَرمُزُ إلى أَقْسامِ أَبْوابِ المَجالاتِ المَعرِفِيَّةِ لإدارَةِ المَشْرُوعاتِ التِّسْعِ وَالأَرْبَعِين (49)، ضِمنَ دَلِيلِ المَتْنِ المَعْرِفِيّ لإدارَةِ المَشْرُوعات.

تَفْسِير 4
مِن بَيْنِ المُدخَلات، وَالوَسائِلِ وَالأَساليب، وَالمُخرَجات (ITTOs) السِّتُّمائَةِ وَخَمْسٍ وَسِتِّين (665) الفَرِيدُ مِنْها وَغَيْرُ المُكَرَّرِ مائَةٌ وَسَبْعٌ وَأَرْبَعون (147) فَقَط.

تَفْسِير 5
الأَسْهُمُ تُظهِرُ أَمثِلَةَ تَبادُلِ العَلاقاتِ وَالتَّفاعُلاتِ البَيْنِيَّةِ، وَالتَّشارُكِ، وَالتَّصْوِيبِ، وَالتَّكامُلِ، فِيما بَينَ، وَضِمْنَ، عَمَلِيَّاتِ وَمَجمُوعاتِ عَمَلِيَّاتِ إدارَةِ المَشْرُوعات.

تَفْسِير 6
في واقِعِ الحالِ، وَلاسْتِثْنائِيَّةِ وَفَرادَةِ كُلِّ مَشْرُوعٍ مِنَ المَشْرُوعات، فَإنَّ الحَيَوِيَّةَ (Agility) في التَّطبِيقِ العَمَلِيِّ لِلعَمَلِيَّاتِ وَمَجمُوعاتِ العَمَلِيَّاتِ تُقَرَّرُ مِن قِبَلِ مُدِيرِ المَشْرُوعاتِ المِهْنِيّ (PMP)، مِن خِلالِ إدارَةِ وَمُشارَكَةِ مَعنِيِّي المَشْرُوعِ، وِبما يُلائِمُ ظَرفَ المَشْرُوعِ القائِم.

تَفْسِير 7
تَظْهَرُ عَمَلِيَّاتُ إدارَةِ المَشْرُوعاتِ مَنْطِقِيًّا ضِمْنَ مُجمُوعاتِ عَمَلِيَّاتِ إدارَةِ المَشْرُوعاتِ الحاوِيَةِ لِجُلِّ أَنْشِطَتِها الحادِثَةِ بِها.

تَفْسِير 8
إنَّ مُجمُوعاتِ عَمَلِيَّاتِ إدارَةِ المَشْرُوعاتِ لا تُعَدُّ بِأَيِّ حالٍ أَطْوارًا (Phases) لِدَوْراتِ حَياةِ المَشْرُوعات، وَلا مَراحِلَ (Stages) كَذلِك؛ وَإنَّما هِيَ مُجمُوعاتُ عَمَلِيَّاتٍ (Process Groups) وَحَسْب.

المَجالاتُ المَعرِفِيَّةُ لإدارَةِ المَشْرُوعات [Part1.4-13]

- إدارَةُ تَكامُلِ المَشْرُوع (P1.4)
- إدارَةُ نِطاقِ المَشْرُوع (P1.5)
- إدارَةُ الجَدْوَلِ الزَّمَنِيِّ لِلمَشْرُوع (P1.6)
- إدارَةُ كُلْفَةِ المَشْرُوع (P1.7)
- إدارَةُ جَوْدَةِ المَشْرُوع (P1.8)
- إدارَةُ مَوارِدِ المَشْرُوع (P1.9)
- إدارَةُ تَواصُلِ المَشْرُوع (P1.10)
- إدارَةُ مُجازَفاتِ المَشْرُوع (P1.11)
- إدارَةُ تَوْرِيداتِ المَشْرُوع (P1.12)
- إدارَةُ مَعْنِيِّي المَشْرُوع (P1.13)

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